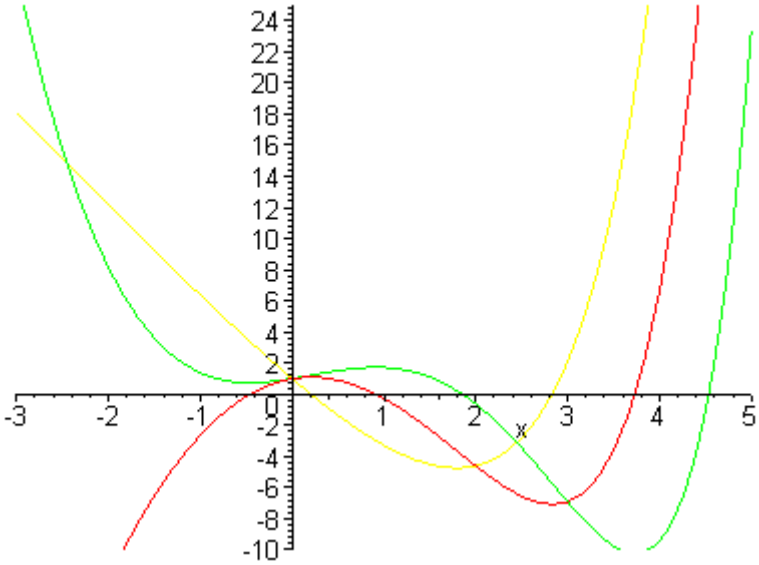
Welcome back.

Here is something to help and refresh your memory.

1. Find the first and second derivatives of the function $f(x) = e^x - x^3$

2. Here is what they look like in maple. Which one is which?



3. Find the first and second derivatives for the rational function $F(x) = \dfrac{x-2}{x+1}$. Then complete the following table:

x	$F(x) = \dfrac{x-2}{x+1}$	$F'(x) =$	$F''(x) =$
-2	$F(-2) =$	$F'(-2) =$	$F''(-2) =$
0	$F(0) =$	$F'(0) =$	$F''(0) =$

4. Describe the local behavior of the function near the points x = -2 and x = 0. State whether the function is rising or falling, leaning to the left or leaning to the right.